

ASSAP MOPS AI #64 Status

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ASSAP MOPS AI #64

- **AI #64: Regarding I/O interfaces between ASSAP and CDTI. Coordinate and propose degraded traffic and qualified traffic interface requirements between ASSAP and the CDTI.**

- **Goals**

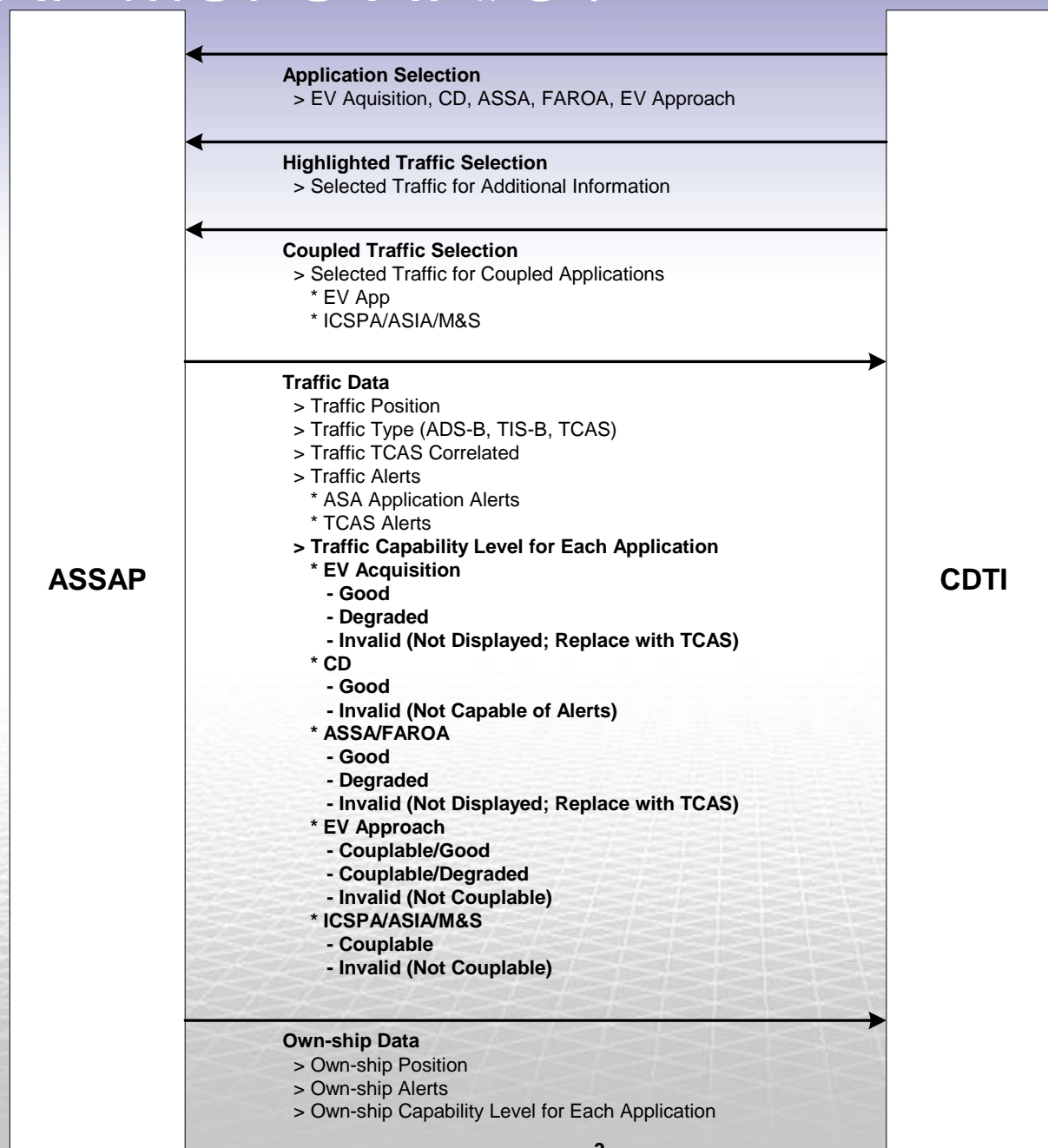
- The determination of “degraded traffic” and “traffic qualification for each application” should be the responsibility of ASSAP (Application Processing).
- The presentation of this traffic information should be the responsibility of the CDTI (via Traffic Symbolology, Traffic List, Traffic Messages, etc.).
 - Note: Some other device may be used to provide the Application Selection, Traffic Selection, and Traffic List (External Control Device for example)?
- The Interface Requirements should be Performance/Functional Based; not hardware dependant
 - For Example, ARINC 735B may contain the bit-to-bit interface requirements

- **Interface Proposal (see Diagram on next page)**

- ASSAP will provide the “Traffic Capability Level for Each Application” to the CDTI based on the ASA MASPS, “Table 2-3 Traffic-ship Data Requirements by ASA Capability Level”



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● EV Acquisition Traffic Capability Level

■ Traffic Capability Level

- Good (for visual aid acquisition)
- Degraded (for visual aid acquisition)
- Invalid (for visual aid acquisition)
 - ▶ Traffic should be removed or replaced with a correlated TCAS track

■ Issues

- When traffic becomes close in range, traffic will become Degraded or Invalid (removed) due to the bearing uncertainty requirement thresholds. Is this behavior desired?



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CD Capability Level

■ Traffic Capability Level

- **Good (capable of generating CD alerts)**
- **Invalid (not capable of generating CD alerts)**

■ Issues

- **What will the CDTI use this information for?**



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ASSA/FAROA Traffic Capability Level

Traffic Capability Level

- **Good (for visual aid acquisition)**
- **Degraded (for visual aid acquisition)**
- **Invalid (for visual aid acquisition)**
 - ▶ Traffic should be removed or replaced with a correlated TCAS track

Issues

- **Should invalid traffic be removed from the CDTI?**



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● **EV Approach Traffic Capability Level**

■ **Traffic Capability Level**

- **Couplable/Good (desired)**
- **Couplable/Degraded (acceptable)**
- **Invalid (not couplable; not acceptable)**

■ **Issues**

- **How will the CDTI differentiate these states?**
- **How will the CDTI differentiate these states with other applications?**



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ICSPA/ASIA/M&S Traffic Capability Level

Traffic Capability Level

- **Couplable (acceptable)**
- **Invalid (not couplable; not acceptable)**

Issues

- **How will the CDTI differentiate these states with other applications?**



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Own-ship Capability Level for Each Application

Issues

- **What is the CDTI expecting for own-ship capability levels?**
 - ▶ **Own-ship position quality?**
 - ❖ **EV Acquisition:** not needed; reflected in the traffic states (good, degraded, invalid)
 - ❖ **ASSA/FAROA:** Good, degraded, invalid in respect to own-ship position on a surface map?



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Application Selection

■ **EV Acquisition, CD, ASSA/FAROA, EV Approach**

■ **Issues**

- **How will the CDTI handle Application Selections?**
- **Can multiple applications be selected at the same time?**
- **Does the CDTI require feedback/acknowledgement from ASSAP?**
 - ▶ **CDTI or ASSAP resets**
 - ▶ **Who will manage the application selection (Available, Selected, Failed, etc.)?**
- **Can this function also come from an external control device; not from the CDTI?**



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Highlighted Traffic Selection

Selected Traffic for Additional Information

- Note: Also used for ASSAP Track Priority Scheme

Propose “Highlighted” versus “Selected”

- Being recommended for the next release of ARINC 735B for clarity purposes.
Note: ARINC 735B is also proposing a new “Engaged” state.
- Issue Paper Needed to Deviate from the ASA MASPS.

Issues

- Can multiple traffic be highlighted at the same time?
 - ▶ If not, then the minimum is to handle “one” highlighted traffic.
- Does the CDTI require feedback/acknowledgement from ASSAP?
 - ▶ CDTI or ASSAP resets
- Can this function also come from an external control device; not from the CDTI?



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Coupled Traffic Selection

Selected Traffic for Coupled Applications

Issues

- **Can multiple traffic be coupled at the same time?**
 - ▶ **Example: One for EV Approach and another for ICSPA**
- **Does the CDTI require feedback/acknowledgement from ASSAP?**
 - ▶ **CDTI or ASSAP resets**
- **Can this function also come from an external control device; not from the CDTI?**

